APPENDIX V

REGULATION OF MEMBERS OF BOARD OF GOVERNORS

NUMBER 20/6/PADG/2018

DATED

ON

IMPLEMENTATION OF OPEN MARKET OPERATION

CALCULATION OF SETTLEMENT OF OUTRIGHT SBN PURCHASE AND SALE FROM BANK INDONESIA IN THE SECONDARY MARKET

A. Formula of Settlement Price Calculation per unit

1. If Sovereign Debt Securities (SUN) are in the form of Sovereign Bond with Coupon (including ORI)

   Ps = P + AI

   where,

$$P = \left[\frac{N}{\left(1+\frac{i}{n}\right)^{\left(F-1+\frac{d}{E}\right)}} \right] + \left[\sum_{k=1}^{F} \frac{N \times \frac{c}{n}}{\left(1+\frac{i}{n}\right)^{\left(k-1+\frac{d}{E}\right)}} \right] - \left[N \times \frac{c}{n} \times \frac{a}{E} \right]$$

$$AI = N \times \frac{c}{n} \times \frac{a}{E}$$

2. If SUN is in the form of Sovereign Bond without Coupon (*zero coupon* bond)

$$Ps = \frac{N}{(1+i)^{\frac{D}{365}}}$$

3. If SUN is in the form of SPN

$$Ps = \frac{N}{1+\left(i \times \frac{D}{365}\right)}$$

where,

Ps	=	Settlement Price per unit
P	=	Net price per unit
N	=	Nominal value of SUN per unit
AI	=	accrued interest per unit of SUN
c	=	coupon rate in percentage
i	=	yield to maturity in percentage until 5 (five) decimal
n	=	Coupon payment frequency in a year
D	=	actual days counted from 1 (one) day after settlement date until maturity date
a	=	actual days counted from 1 (one) day after commencement

date of coupon period until settlement date

d = actual days counted from 1 (one) day after settlement date until the next coupon payment date

E = actual days counted from 1 (one) day after commencement date of coupon period until the next coupon payment date, where the settlement is made

F = Frequency of the remaining coupon payment from settlement date until maturity date

k = 1, 2, 3, ..., F

B. Example of calculation of Settlement Price per unit

1. SUN in the form of Sovereign Bond with Coupon (including ORI)

On 14 July 20XX with settlement on the same day, Bank Indonesia purchases/sells Sovereign Bond at nominal value per unit of Rp 1,000,000.00 (one million rupiah) at a coupon rate of 12.125% (twelve point one two five percent) per year.

The Sovereign Securities will mature on 15 February 20XX and the coupon will be paid in arrears on 15 February and 15 August every year.

If the yield offered is 8.21000% (eight point two one zero zero zero percent) and settlement is made on 14 July 20XX, the settlement price per unit of SUN is calculated through the following steps:

N = Rp 1,000,000.00 (one million Rupiah)

c = 12.125% (twelve point one two five percent)

i = 8.21000% (eight point two one zero zero zero percent)

n = 2 (two) times in a year (semi annually) on 15 February and 15 August

a = 149 (one hundred forty-nine) days, namely the actual days counted from 1 (one) day after the commencement date of the coupon period (16 February 20XX) until the settlement date (14 July 20XX)

d = 32 (thirty-two) days, namely the actual days counted from 1 (one) day after the settlement date (15 July 20XX) until the next coupon payment date (15 August 20XX)

E = 181 (one hundred eighty-one) days, namely the actual days counted from 1 (one) day after the coupon period

commencement date until the next coupon payment date, where the settlement occurs (16 February 20XX until 15 August 20XX)

F = 4 (four) times, namely coupon payment amount remaining from the settlement date until maturity date

k = 1, 2, 3,..., F

The net price per unit is calculated as follows:

$$P = \left[\frac{Rp1.000.000}{\left(1+\frac{8,21\%}{2}\right)^{\left(4-1+\frac{32}{181}\right)}}\right] + \left[\sum_{k=1}^{4}\frac{Rp1.000.000\ x\ \frac{12,125\%}{2}}{\left(1+\frac{8,21\%}{2}\right)^{k-1+\frac{32}{181}}}\right] - \left[Rp1.000.000\ x\ \frac{12,125\%}{2}\ x\ \frac{149}{181}\right]$$

= Rp880,027.69 + Rp226,910.54 – Rp49,906.77

= Rp1,057,031.45

Where the accrued interest per unit is calculated as follows:

AI = Rp1,000,000 x 12.125%/2 x 149/181

= Rp49,906.77

The settlement price per unit is calculated as follows:

Ps = P + AI

= Rp1,057,031.45 + Rp49,906.77

= Rp1,106,938.22

= Rp1,106,938.22

So, the settlement price per unit of SUN after rounding down amounts to Rp1,106,938.00 (one million one hundred six thousand nine hundred thirty-eight rupiah).

2. If SUN is in the form of Sovereign Bond without coupon (zero coupon bond)

On 14 July 20XX with settlement on the same day, Bank Indonesia purchases/sells Sovereign Bond at a nominal value per unit of Rp1,000,000.00 (one million rupiah).

The Sovereign Bond will mature on 15 February 20XY. If the yield offered is 12.50000% (twelve point five percent) and settlement is made on 14 July 20XX, the settlement price per unit of Sovereign Bond is calculated through the following steps:

N = Rp1,000,000.00

i = 12.50000%

D = 581 (five hundred eighty-one) days, namely the actual days counted from 1 (one) day after the settlement date (15 July 20XX) until the next maturity date (15 February 20XY)

$$Ps = \left[\frac{Rp1.000.000}{(1 + 12{,}50000\%)^{\left(\frac{581}{365}\right)}}\right]$$

Ps = Rp829,041.74

= Rp829,042

3. SUN in the form of Sovereign Treasury Bills (SPN)

On 14 July 20XX with settlement on the same day, Bank Indonesia purchases/sells SPN at a nominal value per unit of Rp1,000,000.00 (one million rupiah).

The SPN will mature on 18 March 20XY. If the yield offered is 12.00000% (twelve percent) and settlement is made on 14 July 20XX, the settlement price per unit of SPN is calculated through the following steps:

N = Rp1,000,000.00

i = 12.00000%

D = 248 (two hundred forty-eight) days, namely the actual days counted from 1 (one) day after the settlement date (14 July 20XX) until the next maturity date (19 March 20XY)

$$Ps = \left[\frac{Rp1.000.000}{1 + (12{,}00000\% \, x \, \frac{248}{365}}\right]$$

Ps = Rp924,612.42

= Rp924,612.00

MEMBER OF BOARD OF
GOVERNORS,

ERWIN RIJANTO